

**DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**  
**Housing - Federal Housing Commissioner**

**Series and Series Number:**  
**MATERIALS RELEASE NO: 1274c**  
(Supersedes issue dated  
June 8, 2001)

**TO: DIRECTORS, SINGLE FAMILY HOCs**  
**DIRECTORS, MULTIFAMILY HUBs**

**ISSUE DATE**

November 18, 2004

**REVIEW DATE**

November 18, 2007

**SUBJECT: 1. Product GP Lam<sup>®</sup> Laminated Veneer Lumber**

**2. Name and address  
of Manufacturer**

Georgia-Pacific Corporation  
1000 North Park Drive  
Roxboro, NC 27573

Data on the nonstandard product described herein have been reviewed by the Department of Housing and Urban Development (HUD) and determination has been made that it is considered suitable from a technical standpoint for the use indicated herein. This Release does not purport to establish a comparative quality or value rating for this product as compared to standard products normally used in the same manner.

This Materials Release cannot be used as an indication of endorsement or approval by HUD of the described product, and any statement or representation, however made, indicating such approval or endorsement by HUD is unauthorized. See Code 18, U.S.C. 709.

Any reproduction of this Release must be in its entirety.

**USE:**

General framing lumber.

**DESCRIPTION:**

GP LAM<sup>®</sup> Laminated Veneer Lumber (LVL) is manufactured from Southern Pine and Yellow Poplar veneers in a hot press with veneers having grain-oriented parallel to the billet length. Each veneer is end-jointed during assembly of the billet. Veneers are bonded with an exterior-type phenolic adhesive complying with ASTM D-2559. Lay-up patterns of various veneer quantities, grades and thicknesses are compressed to the required billet thickness and glue lines cured with heat. Veneers are graded by an ultrasonic and/or visual grading process as described in the GP LAM<sup>®</sup> LVL Quality Manual.

GP LAM<sup>®</sup> LVL is available in 2.1ES, 2.0ES, 1.9-YP and 1.8-SP grades, thicknesses of ¾ inch to 5-¼ inches, widths of 1-½ inches to 48 inches and lengths up to 80 feet.

## REQUIREMENTS:

GP LAM<sup>®</sup> LVL shall meet all requirements of this Materials Release (MR).

### 1. Manufacturing Tolerance

Length tolerance on finished product shall be the nominal piece length -0", +3".  
Thickness tolerance shall be +/- 0.050" (1-3/4" and less) and +0.050", -0.125" (3-1/2" thick). Width tolerance by member depth is as follows:

Depth	Tolerance
9-1/2"	+0", -1/16"
11-7/8"	+0", -1/16"
14"	+0", -1/8"
16"	+0", -1/8"
18"	+0", -1/8"
20"	+0", -1/8"
22"	+0", -1/8"
24"	+0", -1/8"

(All dimensional tolerances specified at time of manufacturing)

### 2. Adhesive

Adhesive shall be an exterior type complying with ASTM D-2559. Each manufacturer's adhesive complying with GP LAM<sup>®</sup> LVL Manufacturing standard shall be certified to meet product standards PS 1-95.

### 3. Veneer

Each veneer sheet shall be ultrasonic and/or visually graded. Dry veneer bundles should be identified indicating species, and veneer thickness in accordance with the GP LAM<sup>®</sup> LVL Quality Manual.

## DESIGN:

The structural performance of the finished product is assured by sampling and testing in accordance with the quality control program procedures. The design practices for solid sawn lumber apply to GP LAM<sup>®</sup> laminated veneer lumber. The design stresses of Table 1 are for dry conditions of use (applications where moisture contents do not exceed 16%), in members where loads are of "normal" duration. Adjustments specified by NDS are applicable.

Lateral nail holding and withdrawal values shall be provided in the National Design Specification for Wood Construction (NDS) for Douglas Fir-Larch Sawn lumber. Holding power of bolts shall also be as provided in the NDS for Douglas Fir-Larch. These design values are subject to adjustment for duration of load.

**Table 1 - GP Lam<sup>®</sup> LVL Allowable Design Stresses<sup>1</sup>**  
(pounds per square inch, psi)

Product Thickness	GRADE <sup>2</sup> SPECIE	AXIAL		JOIST/B EAM			
		F <sub>t</sub> <sup>4</sup>	F <sub>c</sub>	F <sub>b</sub> <sup>3,5</sup>	F <sub>v</sub>	MOE (x 10 <sup>6</sup> )	F <sub>c</sub> ⊥
¾ inch to 5-¼ inch	1.8-SP	1825	2400	2600	400	1.8	900
	1.9-YP	1825	2500	2750	295	1.9	845
	2.0-ES	1825	2600	2900	295	2.0	845
	2.1-ES	1825	2750	3150	295	2.1	845

Table 1 Notes:

1. Allowable design stress adjustment shall be in accordance with the HUD Minimum Property Standards. Design stress adjustments to E and F<sub>c</sub>⊥ are not allowed.
2. Yellow Poplar – YP, Southern Pine – SP and Southern Pine, Yellow Poplar, or mixed Yellow Poplar and Southern Pine – ES.
3. F<sub>b</sub> allowable design values are for 12-inch depths. For other depths, multiply by the factor below or (12/d)<sup>1/9</sup>. For depths less than 3.5-inches, use the factor for the 3.5 inch depth.  
Depth  
(inches) 3.50 5.50 7.25 9.25 11.25 12.00 16.00 20.00 24.00  
Factor 1.15 1.09 1.06 1.03 1.01 1.00 0.97 0.94 0.93
4. A G-P LAM<sup>®</sup> LVL joist which qualifies as a repetitive member may have F<sub>b</sub> increased in accordance with the NDS.
5. Uniform load deflection for a simple span member is calculated as follows:

$$\Delta = \frac{270 w l^4}{E b d^3} + \frac{28.8 w l^2}{E b d} \quad \text{where,}$$

Δ = Total deflection, (in.)  
E = Shear free modulus of elasticity, (lbf/in.<sup>2</sup>)  
w = Applied uniform loads, (lbf/ft)  
l = Design span, (ft)  
d = Member depth, (in.)  
b = Member width, (in.)

### INSTALLATION AND LIMITATIONS:

Installation shall be in strict accordance with HUD Minimum Property Standards as set forth in 24 CFR 200.929, and local codes for solid lumber construction, with the following limitations:

1. Nails installed parallel to glue lines in the narrow face of southern pine, yellow poplar or eastern species GP LAM<sup>®</sup> LVL  $\frac{3}{4}$  inch or thicker and 3- $\frac{1}{2}$  inches or wider shall be spaced a minimum of 6 inches on center for 10d and 12d common nails or No. 14 gauge staples. Nail spacing on yellow poplar GP Lam LVL 1- $\frac{3}{4}$  inches or thicker and 3- $\frac{1}{2}$  inches or wider may be nailed not less than 4 inches on center for 10d and 12d common nails or No. 14 gauge staples. Southern pine or eastern species GP LAM<sup>®</sup> LVL 1- $\frac{3}{4}$  inches or thicker and 3- $\frac{1}{2}$  inches or wider may be nailed not less than 6 inches on center for 10d and 12d common nails or No. 14 gauge staples. A 16d common nail may be installed at a minimum 8 inches on center spacing parallel to the glue line in the narrow face of southern pine, yellow poplar or eastern species GP LAM<sup>®</sup> LVL 1- $\frac{3}{4}$  inches or thicker and 5- $\frac{1}{4}$  inches or wider.
2. GP LAM<sup>®</sup> LVL shall be stored and handled in accordance with the specifications contained in the manufacturer's literature.

### CERTIFICATION AND IDENTIFICATION:

Georgia-Pacific Corporation shall certify that the GP LAM<sup>®</sup> LVL conforms to the requirements of this MR. APA-EWS shall validate the manufacturer's certification that the GP LAM<sup>®</sup> LVL meets the requirements of this MR. The quality assurance test records shall be made available for inspection by HUD upon request.

Each member certified as conforming to this MR shall be marked with the following information:

1. GP LAM<sup>®</sup> LVL.
2. Manufacturer's name or logo.
3. Registered logo of APA-EWS.
4. Species or species group.
5. HUD MR 1274c.
6. Mill Number 1028.

Sample Stamps

### QUALITY CONTROL:

Quality Control shall be provided in accordance with procedures established by Georgia-Pacific Corporation to manufacture products that meet or exceed prescribed quality levels. A complete and thorough quality system shall be maintained at all times that is similar to the program outlined in the Georgia-Pacific Corporation Quality Manual (Revised September 2004) for production of GP Lam® LVL.

### WARRANTY:

Georgia-Pacific Corporation warrants GP LAM® Laminated Veneer Lumber to be free of any faulty materials and workmanship in the manufacturing process for a period of 20 years from the date of installation. The liability of Georgia-Pacific Corporation under this warranty shall be limited to replacement of defective materials and the cost of installation or at the option of Georgia-Pacific Corporation payment in lieu therefore.

This warranty applies to any material failure due to manufacturing only and does not cover nor will the manufacturer be liable for any defects or damages due to misuse, improper installation, or damage resulting from fire, lightning or other causes beyond the manufacturer's control.

The manufacturer's warranty does not, in any way, relieve the builder of responsibility under the terms of the Builders Warranty required by the National Housing Act or under any provisions applicable to any other builder or to the owner upon completion of the property.

### MANUFACTURER'S RESPONSIBILITIES:

Issuance of this Materials Release (MR) commits the manufacturer to fulfill as a minimum, the following:

1. Produce, label and certify the material, product or system in strict accordance with the terms of this MR.
2. Provide necessary corrective action in a timely manner for all cases of justified complaint, poor performance or failure reported by HUD.
3. When requested, provide the FHA Standards, Office of Manufactured Housing Programs, HUD Headquarters, with a representative list of properties in which the material, product or system has been used, including complete addresses or descriptions of locations and dates of installation.
4. Inform HUD in advance of changes in production facilities, methods, design of the product, company name, ownership or mailing address.

MANUFACTURING LOCATIONS:

Georgia-Pacific produces GP LAM<sup>®</sup> Laminated Veneer Lumber at the following plant:

Georgia-Pacific Corporation  
1000 North Park Drive  
Roxboro, NC 27573  
Phone: (336) 599-1000

EVALUATION:

This MR shall be valid for a period of three years from the date of initial issuance or most recent renewal or revision, whichever is later. The holder of this MR shall apply for a renewal or revision 90 days prior to the review date printed on this MR. Submittals for renewal or revision shall be sent to:

U. S. Department of Housing and Urban Development  
FHA Standards, Office of Manufactured Housing Programs  
451 7<sup>th</sup> Street, SW, Room 9168  
Washington, DC 20410-8000

The appropriate User Fee shall be sent to:

U. S. Department of Housing and Urban Development  
Miscellaneous Income - Technical Suitability of Products Program Fees  
Bank of America  
P. O. Box 198762  
Atlanta, GA 30384-8762

The holder of this MR may apply for revision at any time prior to the review date. Minor revisions may be in the form of a supplement to the MR.

If the Department determines that a proposed renewal or supplement constitutes a revision, the appropriate User Fee for a revision will need to be submitted in accordance with Code of Federal Regulations 24 CFR 200.934, "User Fee System for the Technical Suitability of Products Program", and current User Fee Schedule.

CANCELLATION:

Failure to apply for a renewal or revision shall constitute a basis for cancellation of the MR. HUD will notify the manufacturer that the MR may be cancelled when:

1. conditions under which the document was issued have changed so as to affect production of, or to compromise the integrity of the accepted materials, product, or system,
2. the manufacturer has changed its organizational form without notifying HUD, or
3. manufacturer has not complied with responsibilities it assumed as a condition of HUD's acceptance.

However, before cancellation, HUD will give the manufacturer a written notice of the specific reasons for cancellation, and the opportunity to present views on why the MR should not be cancelled. No refund of fees will be made on a canceled document.

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This Materials Release is issued solely for the captioned firm and is not transferable to any person or successor entity.

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